

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)
(Use several sheets if necessary)

Date Submitted to PTO: September 28, 2001

ATTY DOCKET NO.
2000_1422SERIAL NO.
09/686,466APPLICANT
Mitsuaki OSHIMA et al.FILING DATE
October 12, 2000GROUP
2614

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL SCITY		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AS	AA						
SEP 28 2001	AB						
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	AI						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AS	AJ	04-196822	7-16-92	Japan			abstract
AS	AK	0 506 400	9-30-92	Europe			X
	AL						
	AM						
	AN						

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

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DATE CONSIDERED

4.01.02

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY DOCKET NO.
2000_1422SERIAL NO.
09/686,466

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LIST OF REFERENCES CITED BY APPLICANT
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APPLICANT
Mitsuaki OSHIMA et al.

Technology Center 2000

Date Submitted to PTO: April 10, 2001

FILING DATE
October 12, 2000GROUP
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U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AS	AA	5,565,926	10-15-96	Bryan et al.	—	—	
	AB						
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	AD						
	AE						
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	AH						
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FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AS	AJ	2-166979	6-27-90	Japan	—	—	abstract
	AK						
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OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)							
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	AP						
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EXAMINER	Amanda			DATE CONSIDERED	04.01.02		

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U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)
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Date Submitted to PTO: January 5, 2001

ATTY DOCKET NO.
2000_1422SERIAL NO.
09/686,466APPLICANT
Mitsuaki OSHIMA et al.FILING DATE
October 12, 2000GROUP
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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AS	AA	5,243,629	9-7-93		—	—	
	AB						
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FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AS	AJ	64-74836	3-20-89	Japan	—	—	abstract
↓	AK	53-108215	9-20-78	Japan	—	—	abstract
↓	AL	63-28145	2-5-88	Japan	—	—	abstract
↓	AM	64-68144	3-14-89	Japan	—	—	abstract
AS	AN	5-218978	8-27-93	Japan	—	—	X

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AS	AA	5,311,550	5-10-94	Fouche et al.	—	—	
	AB	4,630,287	12-16-86	Armstrong			
	AC	4,271,527	6-2-81	Armstrong			
	AD	5,050,188	9-17-91	Dirr			
	AE	5,398,073	3-14-95	Wei			
	AF	5,452,015	9-19-95	Hulyalkar			
	AG	5,565,932	10-15-96	Gitta et al.			
AS	AH	5,481,412	1-2-96	Bannai et al.			
AS	AI	3,909,721	9-30-75	Bussgang et al.	—	—	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AS	AJ	0365431	4-25-90	EP	—	—	X
	AK	0485105	5-13-92	EP			X
	AL	92/14343	8-20-92	WO			X
	AM	89/08366	9-8-89	WO			X
AS	AN	0031193	7-1-81	EP	—	—	X

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

AS	AO	Shinji Matsumoto et al., "200 Mb/s 16 QAM Digital Radio-Relay System Operating in 4 and 5 GHz Bands", Japan Telecommunications Review, January 1982, vol. 24, no. 1, pages 65-73.
AS	AP	M. Pecot et al., "Compatible Coding of Television Images, Part 2. Compatible System", Signal Processing Image Communication, October 2, 1990, no. 3, pages 259-268.
AS	AQ	Mitsuaki Oshima, "Constellation-Code Division Multiplex for Digital HDTV", IEEE, 1992, pages 1086-1092.

EXAMINER

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AS	AA	4,227,152	10-7-80	Godard et al.	—	—	
	AB	4,525,846	6-25-85	Bremer et al.	—	—	
	AC	4,751,478	6-14-88	Yoshida	—	—	
	AD	4,891,806	1-2-90	Farias et al.	—	—	
	AE	4,903,125	2-20-90	Parker	—	—	
	AF	4,937,844	6-26-90	Kao	—	—	
↓	AG	5,164,963	11-17-92	Lawrence et al.	—	—	
AS	AH	5,555,275	9-1996	Oshima	—	—	
	AI				—	—	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AS	AJ	0311188	4-12-89	EP	—	—	X
	AK	0329158	8-23-89	EP	—	—	X
	AL	64-5135	1-10-89	JP	—	—	X
↓	AM	63-28145	2-5-88	JP	—	—	X
AS	AN	62-133842	6-17-87	JP	—	—	X

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

AS	AO	Tricia Hill et al., "A Performance Study of NLA 64-State QAM", IEEE Transactions on Communications, vol. COM-31, June 1983, no. 6, pages 821-826.
AS	AP	Hideki Ishio et al., "A Proposal of a Carrier Digital Transmission System Using Multi-Level APSK", pages 1-20.
AS	AQ	Shanmugam, "Digital and Analog Communication Systems" 1979, p. 272.

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AS	AA	5,105,442	4-14-92	Wei	—	—	
	AB	4,048,572	9-13-77	Dogliotti et al.	—	—	
	AC	5,282,019	1-25-94	Basile et al.	—	—	
	AD	5,311,547	5-10-94	Wei	—	—	
	AE	5,267,021	11-30-93	Ramchandran et al.	—	—	
	AF	5,038,219	8-6-91	Yamashita et al.	—	—	
✓	AG	5,087,975	2-11-92	Citta et al.	—	—	
AS	AH	5,086,340	2-4-92	Citta et al.	—	—	
	AI				—	—	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AS	AJ	53-137657	12-1-78	JP	—	—	X
	AK	0282298	9-14-88	Europe	—	—	X
	AL	0392538	10-17-90	Europe	—	—	X
✓	AM	0490552	6-17-92	Europe	—	—	X
AS	AN	0506400A2	9-30-92	Europe	—	—	

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

AS	AO	Khaled Fazel et al., Combined multilevel coding and multiresolution modulation, February 8, 1993, Pages 1081-1085
AS	AP	P. Hoeher et al., Performance of an RCPC-Coded OFDM-based Digital Audio Broadcasting (DAB) System, IEEE Global Telecommunications Conference "Globecom '91", December 2-5, 1991, Vol. 1 of 3, Pages 2.1.1 - 2.1.7
AS	AQ	K. M. Uz et al., Combined multiresolution source coding and modulation for digital broadcast of HDTV*, 1992, Pages 283-292

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AS	AA	5,142,353	8-25-92	Kageyama et al.	—	—	
↓	AB	5,197,061	3-23-93	Halbert-Lassalle et al.	—	—	
↓	AC	5,291,289	3-1-94	Hulyalkar et al.	—	—	
AD	AD	5,166,924	11-24-92	Moose	—	—	
	AE						
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	AG						
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FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AD	AJ	0448492A1	9-25-91	Europe	—	—	
↓	AK	0485108A2	5-13-92	Europe	—	—	
↓	AL	0525641A2	2-3-93	Europe	—	—	
↓	AM	0540231A2	5-5-93	Europe	—	—	
AD	AN	0531046A2	3-10-93	Europe	—	—	

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

AD	AO	K. M. Uz et al., Multiresolution Source and Channel Coding for Digital Broadcast of HDTV, 1992, Pages 61-69.
AD	AP	Nambi Seshadri et al., Multi-Level Block Coded Modulations with Unequal Error Protection for the Rayleigh Fading Channel, Vol. 4, No. 3, May-June 1993, Pages 325-334.
AD	AQ	William F. Schreiber, Spread-Spectrum Television Broadcasting, SMPTE Journal, August 1992, Pages 538-549.

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FOREIGN PATENT DOCUMENTS

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<i>AS</i>	AJ	85/04541	10-10-85	WO	—	—	
	AK						
	AL						
	AM						
	AN						

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

<i>AS</i>	AO	Martin Vetterli et al., Multiresolution Coding Techniques for Digital Television: A Review, Multidimensional Systems and Signal Processing, Volume 3, May 1992, Pages 161-187.
<i>AS</i>	AP	Ezio Biglieri et al., Introduction to Trellis-Coded Modulation with Applications, April 6, 1992, Pages 173-207.
<i>AS</i>	AQ	English Language Abstract of European Patent No. 93 30 7575

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<i>AS</i>	AA	4,636,876	1-13-87	Schwartz	—	—	
<i>AS</i>	AB	4,855,692	8-8-89	Kennard et al.	7	—	
<i>AS</i>	AC	4,873,701	10-10-89	Tretter	7	—	
<i>AS</i>	AD	4,958,360	9-18-90	Sari	—	—	
<i>AS</i>	AE	5,115,453	5-19-92	Calderbank et al.	—	—	
<i>AS</i>	AF	5,168,509	12-1-92	Nakamura et al.	—	—	
	AG				—	—	
	AH				—	—	
	AI				—	—	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
<i>AS</i>	AJ	0122805	10-24-84	EP	—	—	X
<i>AS</i>	AK	63-180280	7-25-88	JP	—	—	abstract
	AL				—	—	
	AM				—	—	
	AN				—	—	

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

<i>AS</i>	AO	Kazuhiko Nitadori, Synthesis of Multichannel Orthogonal VSB Signals by Quadrature Method, 1976 International Conference on Communications, June 14-16, 1976, Volume 1, Pages 3-25 - 3-29.
<i>AS</i>	AP	Thomas M. Cover, Broadcast Channels, IEEE Transactions on Information Theory, January 1972, Pages 2-14
<i>AS</i>	AQ	"Optimum Weighted PCM for Speech Signals", Sundberg, IEEE Transactions on Communications, Volume COM-26, No. 6, June 1978, Pages 872-881.

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